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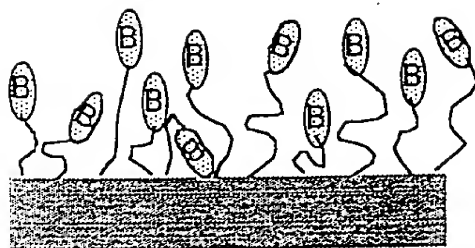
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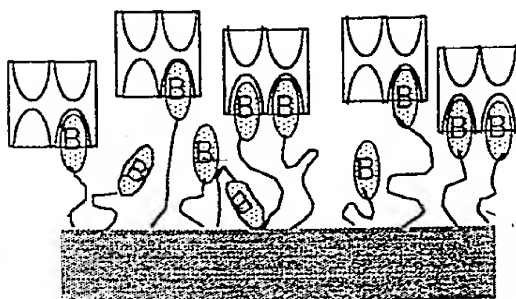
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PLA-PEG-biotin
surface with biotin
presented on flexible
PEG chains



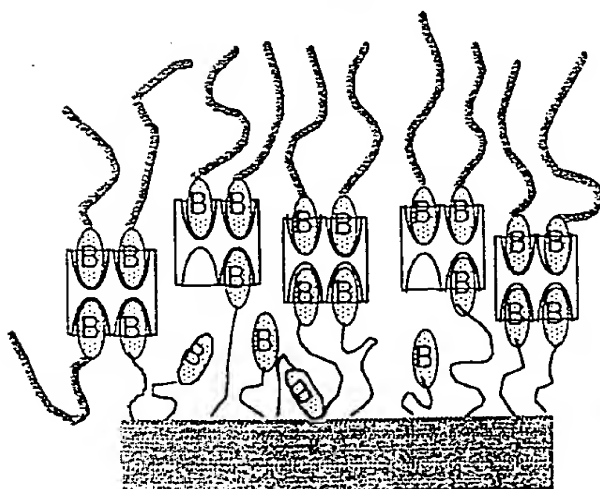
Incubation in aq. solution
of avidin



= avidin



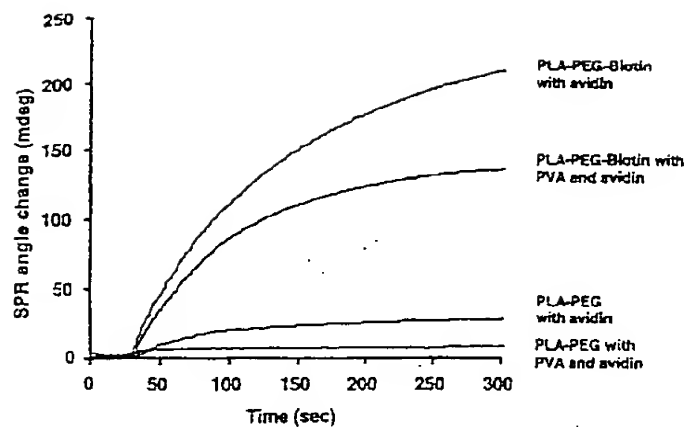
Wash away excess avidin
and incubate with biotinylated
ligand



= biotinylated ligand

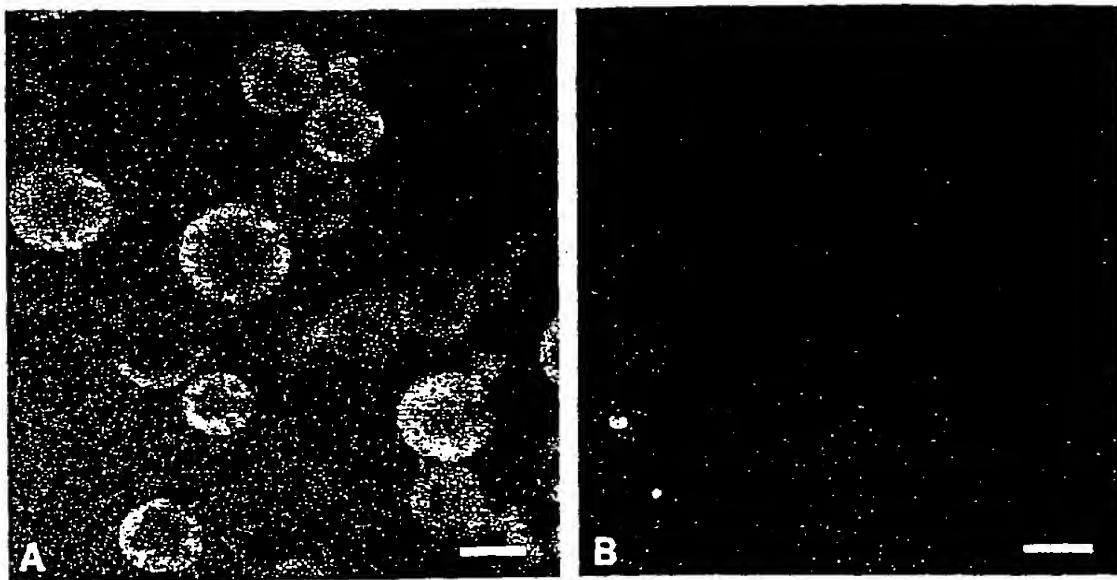
Scheme 1

556T60=0434T60

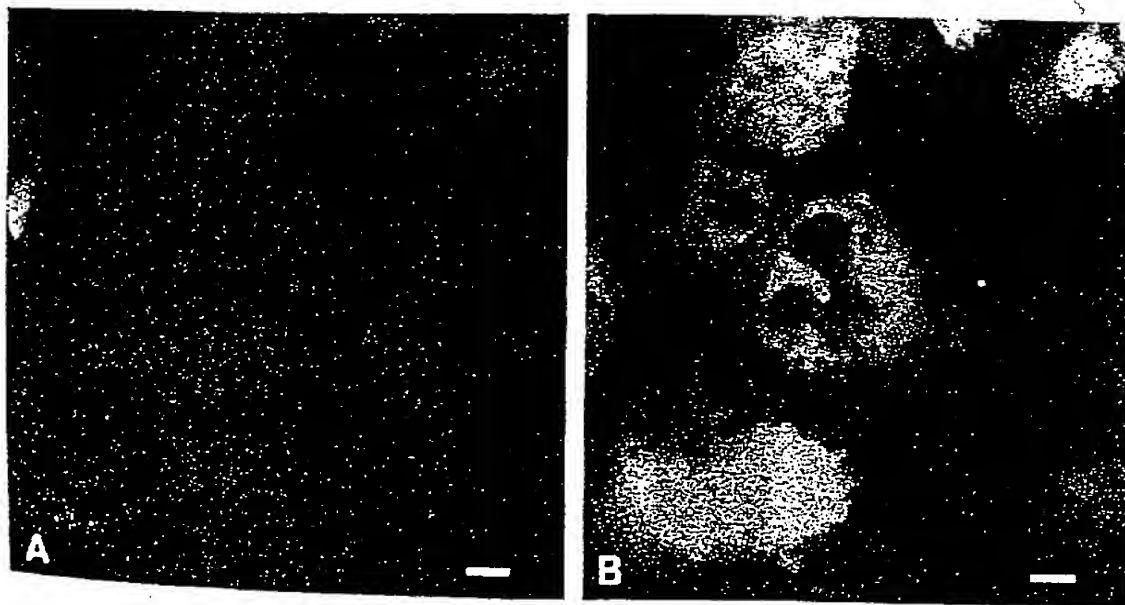


	θ_{SPR} change (mdeg)	
	0.5 $\mu\text{g/ml}$ avidin	0.5 $\mu\text{g/ml}$ avidin after PVA
PLA-PEG-Biotin	211 \pm 13	140 \pm 24
PLA-PEG	34 \pm 8	5 \pm 3

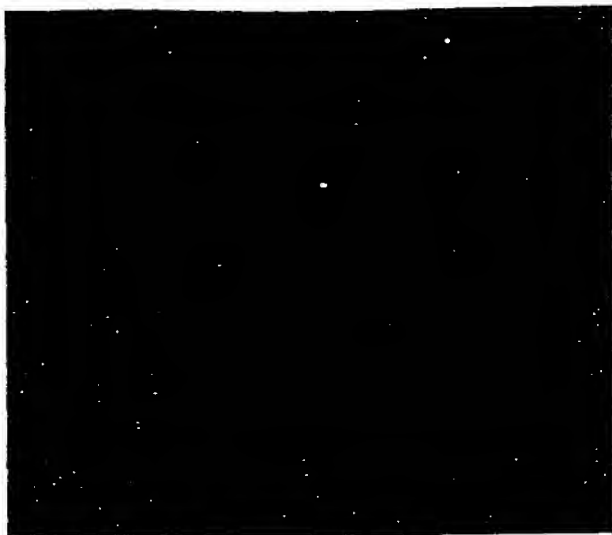
A comparison of avidin immobilization on surfaces of PLA-PEG-biotin and PLA-PEG by surface plasmon resonance analysis. An increase in θ_{SPR} indicates the deposition of material onto the polymer surface. The graph shows the change in θ_{SPR} resulting from the introduction of a 0.5- $\mu\text{g/mL}$ avidin solution into the flow cell of the SPR. For PVA-stabilized surfaces, the PVA absorption phase of the SPR experiment is not shown in the graph.



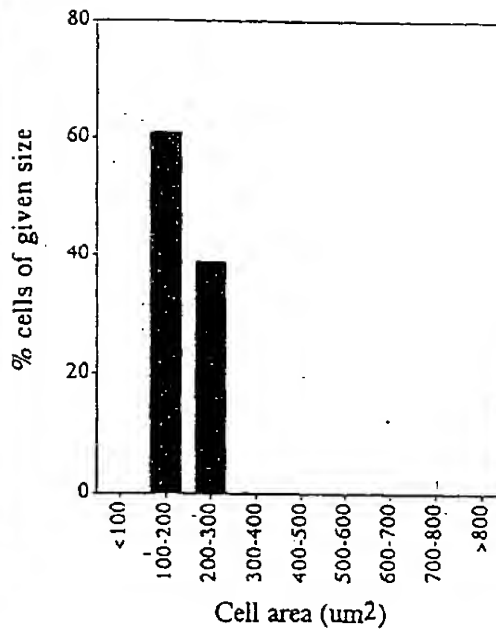
Fluorescent confocal micrograph of biodegradable microparticles. (A) PLA-PEG-biotin microparticles incubated with fluorescent avidin-Texas Red. (B) PLA-PEG (control) microparticles incubated in avidin-Texas Red. Bar is 2 μ m.



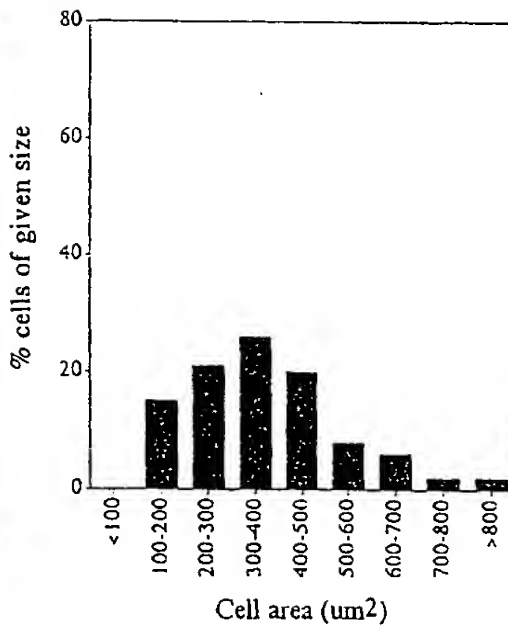
Confocal micrographs of PLA-PEG-biotin microparticles following incubation with avidin-Texas Red and biotin-FITC. (A) Field view with separate channel adjusted for Texas Red emission. (B) Same field as shown in A, except image was simultaneously recorded under a separate optical channel adjusted for FITC emission. Bar is 2 μ m.



PLA-PEG-Biotin



PLA-PEG-Biotin incubated with
avidin & biotin-G(11)GRGDS



Representative micrographs and cell area histograms of bovine aortic endothelial cells on the PLA-PEG-biotin surface and the RGD-functionalized surface 5 h after cell seeding. Note that the cells are rounded with a small cell area on the PLA-PEG-biotin surface while the cells are flattened and spread out on the functionalized surface.